Present Position of the Lumber Industry

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IT IS well known that one of the differences between the immediate repercussions of the outbreak of war in September and the start of the holocaust in 1914 was the generality of the impetus given this time to prices. There was no hesitancy in many important sectors of the price structure during the first few weeks of war as there was in 1914. Rather, expectations changed quickly and the psychological impact was virtually all-inclusive. Prices of such commodities as lard, copper, lead, and cotton did not follow the 1914 precedent and dip downward. Presumably many people thought that price inflation like that of 1916–20 was imminent and sought to protect themselves, though there were, no doubt, some who were merely guarding against delays in delivery.

It is largely on such grounds that an explanation of the rush of buying and the consequent price rise that came in the lumber industry must rest. One might, not unreasonably, have expected a less optimistic reaction to the war, since during the World War lumber had proved not to be a war stimulated industry.

Buying Rush in September.

Nevertheless, a sharp lumber buying movement did develop in September. The trend of developments is indicated by the data in figure 9 which cover a large fraction of the industry New orders for those mills reporting to regional associations had been coming in at about 260 million board feet a week during the period immediately preceding the start of hostilities, somewhat above the level of production of about 240 million feet a week. By the week ended September 23 new business of over 370 million feet was received. While the data to show the precise sources of this increased demand are not available, there is a presumption that it resulted from anticipatory buying by wholesalers, retailers, and industrial consumers. The movement was fostered by the relatively low stock position of these groups. There is no evidence of an increase in total consumption although there has been expansion in particular lumber consuming areas; in fact, the Lumber Survey Committee [1] estimated in its report of November 4 that consumption in the fourth quarter would decline to 6.8 billion feet from the third quarter total of over 7 billion.

After several weeks of accelerated business there was a reappraisal of the situation. A sharp decline in new orders occurred and by the middle of October they fell below production. During November this gap between output and new business was rather wide with the latter fluctuating under 200 million board feet per week. From the end of October to the end of November unfilled orders were reduced from 980 million board feet to 769 million and this downward movement has continued in December. They had been 836 million at the end of August.

This strong buying wave soon produced a marked increase in lumber prices generally. The Bureau of Labor Statistics index of wholesale lumber prices rose from 91.8 (1926=100) in August to 93.7 in September and again to 98.0 in October. The movement of mill prices for some typical lumber items is indicated in table 1. As can be seen from these data, a large part of the price rise, which was transmitted to all the important types of lumber, came between mid-September and mid-October. During the rest of October mill prices leveled off and with the decided decline in new business in November many lumber items were offered at lower prices.

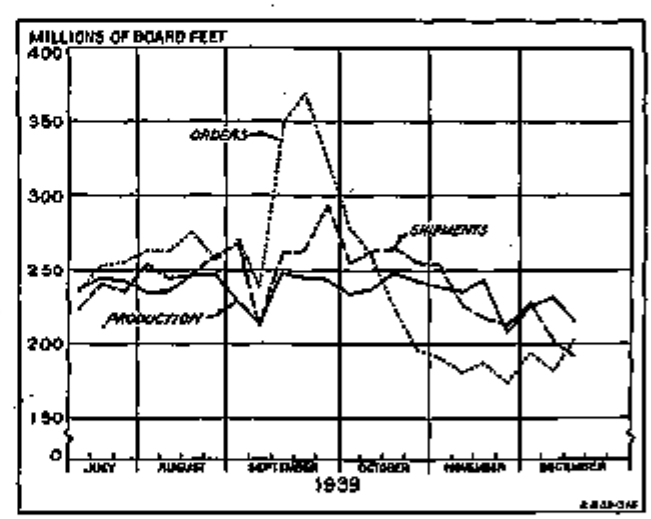

Figure 9.—Total Lumber Production, Shipments and Orders, by Weeks, 1939.

Source of data: National Lumber Manufacturers' Association, based upon data for approximately identical mills.

This price reaction was not immediately reflected widely in wholesale markets. The Bureau of Labor Statistics index of prices in wholesale markets did not decline in November but showed a further slight increase to 98.3.

While supply conditions and the pricing process differ widely among the various sectors of the lumber industry, short-term price changes generally result from the impact of changed demand upon existing stocks. The industry has large possibilities for expansion from the relatively low levels of production of recent years, but it takes some time for these to be realized. The time required for the logging, log transportation, saw milling, drying, and finishing operations does not allow a

[1] Special Lumber Survey Committee established upon recommendations to the President by the Timber Conservation Board, June 1931.

marked expansion of production to meet a flood of new orders within a few weeks or a month's time, particularly during those months when, for climatic reasons, a seasonal decline in production is customary. It has been characteristic of the lumber industry for some time that production lags considerably behind changes in demand so that stocks tend to move in the opposite direction to production. The fact that production and stocks have opposite cyclical patterns can be seen in figure 10. Hence, a sudden increase in demand must be met largely out of stocks and is likely, if of sufficient magnitude, to give a temporary lift to the price structure.

Table 1.—Trend of Prices[1] of 8 Typical Lumber Items

[Dollars per 1,000 board feet]

Item	Aug. 19[2]	Sept. 16[2]	Oct. 14[2]	Nov. 25[2]
Southern pine dimension	24.24	24.86	23.67	24.66
Southern pine flooring	38.25	40.42	42.50	42.42
Ponderosa pine shop	33.51	34.43	34.27	35.28
Douglas fir flooring	27.00	29.80	31.00	30.69
Douglas fir dimension	21.00	22.08	24.00	23.08
Oak flooring	63.00	66.80	68.00	66.63
Plain red oak	39.00	20.60	32.75	26.24
Plain sap gum	21.50	23.06	20.00	25.56

[1] Actual sales, f. o.b. mills. [2] Approximate data.

Source: American Lumberman.

Lumber Stocks Declining.

Total shipments of lumber, which in August had been larger than at any time since 1930, were maintained in September at 2.5 billion board feet and increased to 2.6 billion in October against a customary seasonal contraction at this time of the year. As production declined, though less than seasonally, from 2.4 billion in August to approximately 2.3 billion in September and October, the volume of shipments was maintained partly by withdrawals from existing stocks. This decline in mill stocks continues a movement which has been under way for about 2 years. During 1937 lumber stocks had increased by 1 billion board feet because of the sharp decline in demand that came in the second half of that year. In 1938 these enlarged stocks were reduced 555 million feet and in 1939, by the end of August, a further reduction of over 500 million had been effected. Then, in the next 2 months there was a decline in stocks of 515 million board feet, as a result of the buying touched off by the war. Lumber stocks, in relation to the current rate of consumption, now appear to be somewhat low. Furthermore, present stocks, as the Lumber Survey Committee observed at the end of the third quarter, are broken and ill-assorted in some regions and this tends to encourage erratic price changes. The committee adds that such price changes benefit neither producers nor consumers and evidently discourage more liberal use of lumber and timber products.

Consumption of Lumber Increases in 1939.

An accurate appraisal of the current position and prospects of the lumber industry must, however, be made in terms of more fundamental factors than a short period buying movement. The fact is that lumber consumption in 1939 will exceed that of any year since 1929. Lumber consumption in 1939 is estimated at slightly above 26.5 billion board feet, more than double the depression low of 1932. It will surpass the 1937 figure by about a billion and a half feet. Production has also expanded in 1939 although it is estimated to be about 2 percent under 1937 and 1930, total output in each of these years having been approximately 26 billion feet. The steep climb from 10.8 to 26.5 billion feet measures the progress made from the trough of the depression in 1932 to 1939. Nevertheless, consumption stands far below the level of the twenties; in 1929, not an exceptional lumber year for that decade, consumption was 35.8 billion feet. It is necessary to inquire whether the difference between 1929 and 1939 consumption represents a trend away from lumber use or merely the relatively depressed condition of the national economy.

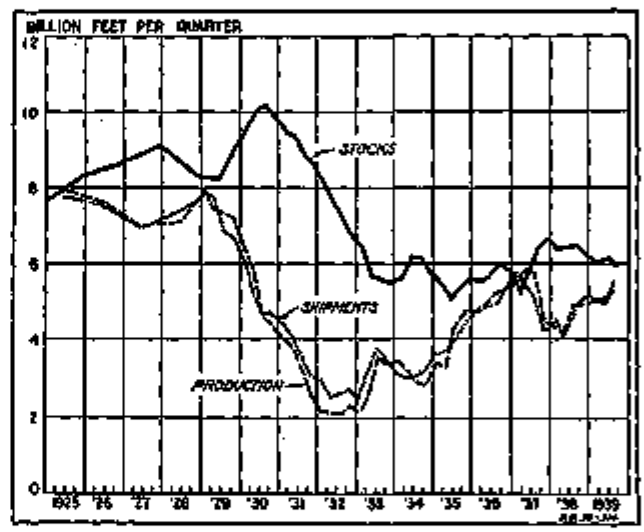

Figure 10.—Softwood Production, Shipments, and Stocks by Quarters, 1925–39 (National Lumber Manufacturers' Association).

NOTE.—Data are adjusted for seasonal variation.

Even in 1929 lumber was known to be in the category of declining rather than expanding industries. The peak in lumber production and consumption came in the years 1906–7. Up to that time it can fairly be said that lumber was the dominant manufacturing industry in our economic development, although for about 10 years steel had become increasingly important. Lumber was the lowest priced and most widely used material for durable goods during the great economic and territorial expansion that followed the Civil War. Its consumption increased from about 8 billion feet in 1859 to almost 45 billion in 1906. The Great Plains of the Middle West were being settled rapidly, towns and cities were springing up, and population, even in the East, was multiplying. This expansion and migration of the population, coupled with the rising productiveness of our economic machine, resulted in an increase in the per capita consumption of lumber during the half century from 260 to 525 board feet.

Declining Trend in Consumption Since 1907.

After 1907 this rising trend was reversed and the lumber industry entered its new phase of declining production and consumption. The great agricultural migration that had added approximately 90,000 new farms per year to the economy, each with a requirement of about 50,000 board-feet of lumber,[1] was over. New materials were being developed and they began to replace lumber in urban buildings, sidewalks, shipbuilding, fencing, and a host of industrial uses.

The comparison of the major outlets for lumber in 1912 and 1928, given in table 2, shows in what areas the trend was declining after the peak in 1907.

Table 2.—Estimated Distribution of National Lumber Consumption for 1912 and 1928 [1]

Class of use	1912, consumption		1928, consumption		Gain (+) or loss (—)	
	Millions feet board measure	Percent	Millions feet board measure	Percent	Millions feet board measure	Percent
Factory	11,200	26	10,300	26	—900	—8
Construction:						
Sash, door, and millwork	2,800	6	3,300	9	+500	+23
Direct to construction	28,200	68	22,000	63	—6,400	—23
Rural construction	15,000	61	5,500	24	—9,500	—63
Urban residential	9,000	31	12,000	53	+3,000	+33
Urban nonresidential	5,300	18	5,400	24	+100	+2
All lumber	43,000	100	36,500	100	—6,500	—15

[1] Forest Service, a National Plan for American Forestry, S. Doc. No. 12, 73d Cong., 1st Sess., 1933, vol. 1, p. 249.

In construction the use of manufactured lumber products (sash, doors, etc.) increased during this period but the total lumber used in this field declined by 5.6 billion board feet. It was entirely in rural construction that the decline occurred, a result of the rural-to-urban shift in population that was taking place. The relatively depressed condition of agriculture during the twenties, which was the underlying cause of the shift in population, also held back the normal replacement and repair demand for lumber. Actual consumption in urban construction, including planing-mill products, increased by substantially more than 3 billion board feet. This increased urban consumption was occasioned by the much higher level of construction activity in 1928 and took place despite the tremendous increase in the use of other building materials which was a concurrent development. It has been estimated that the volume of urban nonresidential building construction in 1928 was twice that of 1912 although lumber consumption was about the same in both years. Thus the relative displacement of lumber by other materials was 50 percent.[2] In urban residential construction, the relative displacement of lumber was also very high, probably in excess of 25 percent, largely a result of the development of multifamily housing.

[1] A National Plan for American Forestry, S. Doc. No. 12, 73d Cong., 1st sess., 1933, vol. 1, p. 248.

[2] Op. cit., pp. 250–253.

It is also notable that, despite the large increase in industrial production during this period, the industrial use of lumber declined from 11.2 billion board feet in 1912 to 10.3 billion in 1928. Other materials of all kinds encroached upon the use of lumber for all industrial purposes although in certain areas the expansion of output was large enough to require an increase in the absolute amount of lumber used. This occurred in some of the largest areas of industrial demand; e.g. boxes and crating, furniture, and motor vehicles; but such gains and those arising out of new industries were more than offset by the decreased consumption in minor industries as is shown in table 3.

Table 3.—Lumber Consumed in Fabricated Products and by Wood-Using Industries, 1912 and 1928

Products	1912	1928
	M ft. b. m.	*M ft. b. m.*
Boxes and crates	4,550,016	4,961,280
Car construction	1,282,090	1,000,406
Furniture	944,678	1,396,612
Vehicles and vehicle parts:		
Nonmotor	508,144	58,941
Motor	170,000	887,375
Total of 6 principal industries	7,495,928	8,197,004
Woodenware, novelties, and dairymen's, poulterers', and apiarists' supplies	206,286	183,880
Agricultural implements	221,220	142,943
Chairs and chair stock	220,701	160,202
Handles	220,216	124,584
Musical instruments	200,105	107,502
Tanks and silos	225,620	66,328
Ship and boat building	199,406	128,342
Fixtures	187,133	120,030
Caskets and coffins	169,205	155,106
Refrigerators and kitchen cabinets	137,616	145,745
Matches and toothpicks	85,443	123,420
Laundry appliances	79,462	33,674
Shade and map rollers	79,223	24,256
Paving material and conduits	76,087	3,350
Trunks and valises	75,688	21,346
Machine construction	69,469	30,627
Boot and shoe findings	66,240	46,742
Picture frames and moldings	65,478	20,047
Shuttors, spools, and bobbins	55,143	44,022
Tobacco boxes	54,127	35,429
Sewing machines	50,847	12,760
Pumps and wood pipe	50,827	16,891
Pulleys and conveyors	39,963	900
Toys	28,927	20,410
Gates and fencing	27,451	1,672
Sporting and athletic goods	26,192	20,872
Patterns and flasks	24,209	20,096
Bungs and faucets	21,112	2,280
Plumbers' woodwork	20,313	16,272
Pencils and pen holders	20,041	39,862
Electrical machinery and apparatus	18,289	68,750
Mine equipment	16,858	22
Professional and scientific instruments	15,060	15,510
Brushes	12,870	17,033
Dowels	11,951	16,087
Elevators	10,010	46
Saddles and harness	9,238	781
Playground equipment	9,065	4,572
Butchers' blocks and skewers	8,187	4,885
Clocks	7,884	3,511
Signs and supplies	6,958	45,507
Printing material	5,325	5,064
Weighing apparatus	5,182	10
Whips, canes, and umbrella sticks	4,847	1,260
Brooms and carpet sweepers	3,377	28,452
Firearms	2,054	1,741
Artificial limbs	897	606
Tobacco pipes	490	1,411
Airplanes	74	9,044
Motion pictures and theatrical scenery		16,222
Total of 50 minor industries	3,651,767	3,170,546
Total, all uses	11,147,695	10,817,511

Source: A National Plan for American Forestry.

The declining trend of lumber consumption is illustrated by the estimate of future "normal" requirements [3] of from 30 to 34 billion board feet annually, a

[3] A National Plan for American Forestry, p. 248.

substantial decline from the 45-billion peak of 1906–07. Had lumber consumption followed the general trend of industrial expansion, its use would have amounted to 54 billion board feet in 1928 instead of 37 billion.

A Decade of Low Consumption.

For the period 1929–39 the trend of lumber consumption is indicated in table 4. It can be seen that, except in 1929, consumption was much below the estimated normal of 30 to 34 billion board feet. The decline from 1929 to 1932 was of the substantial magnitude that characterized durable-goods industries generally. Since 1932 considerable and almost continuous progress has been made, but in 1939 consumption was still more than 9 billion board feet under the 1929 total.

This failure of lumber to regain its former volume is not merely a concomitant of the depressed condition of the economy. The consumption of lumber in the building and construction field is now at the high point since 1929 and is only slightly below the level attained in that year. But in all the other areas shown in table 4 the difference between 1929 and 1939 consumption is considerable, in large part a result of the displacement of lumber by other materials.

Table 4.—Total Lumber Consumption by Major Uses, 1929–39

Year	Total	Building and construction	Boxes and crating	Industrial	Railroad purchasing	Export
	Million feet					
1929	35,507	18,499	4,646	6,036	3,234	3,094
1930	26,456	12,609	4,036	4,763	2,790	2,271
1931	19,070	10,058	3,359	2,290	1,704	1,660
1932	13,106	6,588	2,578	1,425	1,377	1,137
1933	16,148	8,412	2,640	1,614	1,399	1,376
1934	15,467	8,133	2,661	1,670	1,666	1,337
1935	19,306	11,427	2,928	2,070	1,580	1,301
1936	22,622	14,890	3,103	2,212	2,016	1,272
1937	25,069	15,503	3,288	2,380	2,448	1,414
1938	21,665	14,049	2,741	1,839	1,187	947
1939 [1]	26,531	18,044	3,089	2,337	1,951	1,087
	In percentage of total					
1929	100.00	52.10	13.08	17.00	9.11	8.71
1930	100.00	47.66	15.24	18.00	10.55	8.57
1931	100.00	52.74	17.61	12.01	8.94	8.70
1932	100.00	50.27	19.67	10.87	10.51	8.68
1933	100.00	55.83	16.65	10.06	8.67	8.42
1934	100.00	52.58	17.21	10.80	10.77	8.64
1935	100.00	59.19	15.17	10.72	8.18	6.74
1936	100.00	67.78	13.52	9.70	8.58	5.38
1937	100.00	62.05	13.10	9.46	9.76	5.64
1938	100.00	65.01	12.65	8.49	5.48	4.37
1939 [1]	100.00	68.00	11.63	8.83	7.35	4.10

[1] 1939 estimated.

Source: Lumber Survey Committee quarterly reports to the Department of Commerce.

The fact that consumption of lumber in boxes and crating is still less than the 1931 figure is indicative of the increased use of paperboard, plywood, and veneer for this purpose. It is probable that this was influenced to some extent by the shift from rail to truck transportation. The relative decline in industrial consumption has been larger than in any other area and this is in some measure because of the use of alternative materials. While the Federal Reserve index of durable-goods production was almost 80 percent of the 1929 figure in 1939, the industrial use of lumber was less than 40 percent. In the case of railroad consumption the decline in lumber used can probably be entirely accounted for by the decrease in outlays for capital goods and maintenance rather than by further displacement of lumber by alternative materials.

The factors influencing our export trade have been of a different character. Lumber exports in 1938 totaled only 947 million feet, the smallest volume in four decades. Although there has been an increase of more than 100 million feet this year, the total is still only one-third that of 1929 when the United States was the major lumber exporting nation of the world. This loss has not been due primarily to a decline in consumption, for world lumber consumption, excluding the Orient, has been fairly well maintained. The United Kingdom imported more lumber in each of the past 5 years than

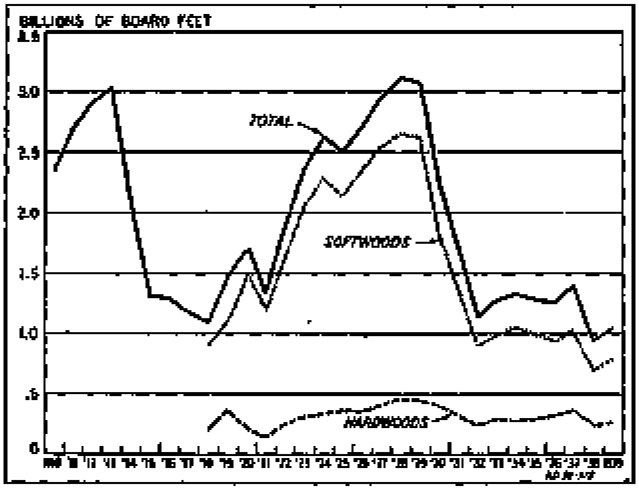

Figure 11.—Total Exports of Hardwood and Softwood Lumber, 1910–39 (U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce).

NOTE.—Figures for 1939 include estimates for December. Data for hardwood and softwood lumber are not reported separately prior to 1913.

in any year since 1913, excepting only 1927, and yet our exports to that market have dwindled. Comparative prices, freight costs, preferential tariffs and other trade barriers, larger log exports, and, in recent years, the war in the Orient, have been the major factors responsible for the decline in our lumber exports. Imperial preference, adopted in 1931, was particularly important as it transferred a large part of our British and Dominions market to British Colombia.

It is interesting to note in this regard that, if the World War is a reliable precedent, export prospects have not been improved by the renewal of armed conflict in Europe. As can be seen in figure 11, lumber exports dropped precipitously after the outbreak of war in 1914 and remained very low until the work of reconstruction after 1918 increased world demand. This decline was immediate; from a total of 235 million feet

in July 1914 exports fell to less than 100 million by October of that year. Of course, even a relative decline of this magnitude is not anticipated from the present low level of exports but, on the other hand, a sizable expansion cannot be expected.

The loss that has been sustained in the boxes and crating, industrial, railroad, and export markets for lumber, means that the fortunes of the lumber industry, particularly the softwood section, are more closely tied to building and construction than they were a decade

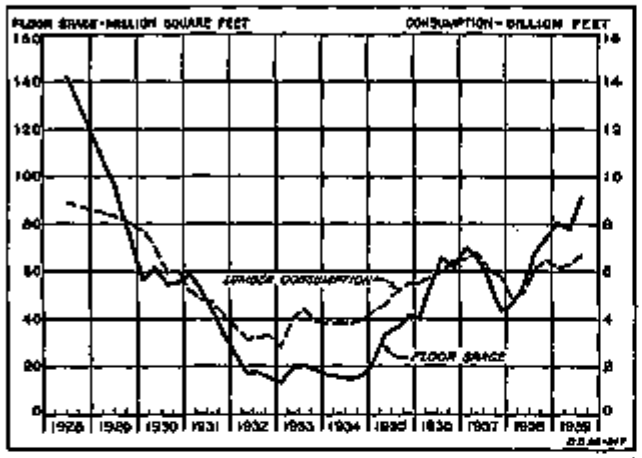

Figure 12.—Floor Space of Residential Construction Contracts Awarded and Consumption of Lumber by Quarters, 1928-39.

Source: Courtesy National Lumber Manufacturers' Association. Floor space, F. W. Dodge Corporation; lumber consumption for 1928 and 1929, U. S. Forest Service, and for 1930-39 Lumber Survey Committee. Data are adjusted for seasonal variations.

ago. Whereas the construction demand was only little more than 50 percent of the lumber market in 1929 it has been close to 70 percent for the past 2 years. It is only because of the heavy demand of the construction industry that total lumber consumption this year has been able to rise above that of any year since 1929

There is a further significant development. While the quantity of lumber consumed in building and construction in 1939 has been only a little below the 1929 figure, construction activity itself was still much under that of 1929. This fact can be explained by the relatively greater expansion in residential building compared with other types of construction. As can be seen in figure 12, lumber consumption in recent years has become more dependent upon residential building. But several other factors appear to be important. There has been relatively more building in the smaller cities where wood is used more extensively. Architectural styles which use wood in combination with other materials for both exteriors and interiors have found more favor with the home builder. It also appears from the little data available that a larger proportion of the houses built have been of frame construction. Furthermore, there is little doubt that the proportion of small lower-priced homes built has been greater and that this activity has provided a large outlet for lumber. For the past several years both lumber manufacturers and retailers, through their national associations, have promoted a project known as the National Small Homes Demonstration, Inc. This project, in cooperation with Federal agencies and other private industry groups, has resulted in stimulating greater interest in housing, especially low-cost housing. The prospects for the lumber industry at this time are to a large degree dependent upon further expansion in this field. The possibilities in this field have already been demonstrated, but only a beginning has been made in tapping this market.